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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/974,806	10/12/2001	Shigetoshi Tomio	122.1052CIPC2	8860

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EXAMINER

DINH, DUC Q

ART UNIT PAPER NUMBER

2674

DATE MAILED: 09/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/974,806

Applicant(s)

TOMIO ET AL.

Examiner

DUC Q DINH

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2001 .
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 .
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____ .

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-8 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. For example, a first high voltage decision unit, a first drive voltage decision unit, a second high voltage decision unit, a second drive voltage decision unit and a time compensation unit are not disclosed in the specification as claimed.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, a first high voltage decision unit, a first drive voltage decision unit, a second high voltage decision unit, a second drive voltage decision unit and a time compensation unit in claims 1-8 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

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A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The examiner examines the application based on the best understood of the claim language.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-5 and 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lower (U. P. Patent No. 4,855,892) and further in view of Shimamoto et al. (U. P. Patent No. 5,300,874), hereinafter, Shimamoto.

In reference to claim 1, Lower discloses a power supply for Plasma Display characterized by a sequencing or timing control to enable and disable the power supply output. The sequencing control will coordinate the activation and deactivation of the display voltage with the other operational voltages within the computer. A short circuit protection scheme is also provided to monitor the electrical potential difference between the power supply input and output. When a pre-selected potential difference between the power supply input and output is exceeded, the power transistor is turned off and the power supply output is disabled. Overshoot protection is included at the input of the power supply so that the power supply components are

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not subjected to over-voltage stresses. In addition, Lower discloses the invention provides a power supply for a computer with a plasma display panel which is capable of withstanding high differential voltages which can occur during short circuit conditions. It is a further object of the invention to protect the voltage regulating devices from excessive heat dissipation during over-current or short circuit conditions. It is a further object of this invention to sequence the gas plasma display voltages and enable such voltages only after all other computer operating voltages have reached a pre-selected, i.e. normal, voltage level. It is a further object of this invention to disable the gas plasma display voltage in the event that any of the other computer operating voltages fail or drop below a preselected level. From the above, it can be seen that Lower discloses a power supply for a plasma display panel provide high voltage and drive voltage as claimed. Lower fails to disclose voltage decision units. Shimamoto discloses an intelligent power supply system for a portable computer, the computer having a central processing unit (CPU), and being operable in response to power supplied from at least two chargeable batteries or an alternating current (AC) adapter, includes means for detachably coupling the batteries to the computer and a PC-CPU for controlling power supply independent of the CPU. The PC-CPU has means for receiving battery select information for controlling power supply and generating a control signal (see abstract). Shimamoto also discloses that the portable computers can includes various flat panel displays such as plasma display. Including in the circuit is a power control microprocessor 306. Processor 306 receives information on the condition of the system including voltage levels, the voltage levels from the DC-DC converter 315 are sensed by the A/D converter 316, these values are compared to the values stored in the

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memory 111 of the processor 306 which controlling various timing, resets and voltage levels depending on the condition of the currents, voltages an peripherals uses (see col. 3-4, Fig. 2).

It would have been obvious to include the power control system of Shimamoto with the power supply of Lower. This would have been obvious because Shimamoto provides the advantages of the CPU which allow the users to program various protection levels. The users could also program start-up and shutdown routines when the plasma display of Lower is turn-on/off. This is important as discussed in Lower wherein a loss of control signals could result in damage to the display by the high voltage power supply. Since both of the references are directed to the control power to plasma display device, it would have been obvious for one skilled in the art consult either references to improve upon the power supply provided, namely the power supply of Lower.

In addition, in reference to claims 2-3, the voltages are detected by the A/D converter 316 with the values set to the CPU 306 which then performs the decision as to the range of the voltage and whether the protection step is required. As to the plural high voltages (i.e. first and second high voltages) it would have been obvious fro the circuit as combined to provide the voltage for all the plasma display electrodes, which can include 2, 3 or more voltage levels.

In reference to claim 4, claim 4 are broadly discloses by Lower who recognizes that the control signal must be enabled first before the high voltage signals can be applied. As combined with Shamamoto, it would have been obvious for sequencing circuit to account for the delay in the high voltage generation. This is made easier by the programmed able power control processor 306 of Shimamoto.

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In reference to claim 5, this is obvious because a range of values must be maintained or else the system would be constantly turned itself on and off. These comparisons will be performed by the converter 316.

In reference to claims 9-14, refer to the previous rejections. In addition, Shimamoto discloses CPU 306 which is used to compare voltage levels using A/D converter 316,. Further, as combined with Lower it would have been obvious for the combined system to start and stop the system and to provide voltage regulation. This would have been obvious as disclosed by Lower wherein it is important that control signals be maintained so the high voltage do not destroy the display. By including the intelligent power control system of Shimamoto the designer can include numerous protective schemes upon the system such as start-up, shutdown, over-voltage, under-voltage, and over-current...

6. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lower (U. P. Patent No. 4,855,892) and further in view of Shimamoto et al. (U. P. Patent No. 5,300,874), hereinafter, Shimamoto.

In reference to claims 6-8, none of the cited reference discloses the specific structure of the plasma display as claimed. Kanazawa discloses a plasma display panel in Fig. 1 satisfying the claimed limitations.

It would have been obvious to use the power circuit of Lower and Shimamoto to drive the display of Kanazawa because the flexibility of the circuit above would allow the power supply to drive any type of plasma device.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **DUC Q DINH** whose telephone number is **(703) 306-5412**. The examiner can normally be reached on Mon-Fri from 8:00.AM-4:00.PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **RICHARD A HJERPE** can be reached on **(703) 305-4709**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

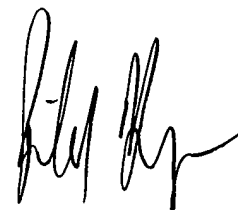
(703) 872-9314 (for Technology Center 2600 only)

Hand-delivery response should be brought to: Crystal Park II, 2121 Crystal Drive,
Arlington, Va Sixth Floor (Receptionist)

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 305-4700.

DUC Q DINH
Examiner
Art Unit 2674

DQD
September 12, 2002



**RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600**